

Serial No. 09/943,283

LISTING OF THE CLAIMS

- 1 1. (Currently Amended) A method for controlling echoes within
2 a telecommunication switching system having a plurality of local exchange
3 carriers and a plurality of local telecommunication switches where each of
4 the plurality of local exchange carriers is connected to a plurality of
5 telephone sets attached to a plurality of local telephone switching offices
6 of each of the plurality of local exchange carriers and each of the plurality
7 of local telecommunication switches is connected to a plurality of
8 telephone sets, comprising the steps of:
9 receiving by one of the plurality of local telecommunication
10 switches a call setup message from one of a first plurality of telephone
11 sets connected to one of a first plurality of local exchange carriers with a
12 first trunk circuit interconnecting the one of the plurality of local
13 telecommunication switches with the one of the first plurality of local
14 exchange carriers;
15 determining by the one of the plurality of local
16 telecommunication switches that the call setup message designates one
17 of a second plurality of telephone sets connected to one of a second
18 plurality of local exchange carriers as a destination of the call setup
19 message;
20 determining by the one of the plurality of local
21 telecommunication switches in response to the call setup message that a
22 first one of a first plurality of local telephone switching offices of the one of
23 the first plurality of local exchange carriers to which the one of the first
24 plurality of telephone sets is connected requires echo cancellation
25 operations; and

Serial No. 09/943,283

26 providing by the one of the plurality of local telecommunication
27 switches in response to the determination that echo cancellation
28 operations are required for the first one of the first plurality of local
29 telephone switching offices echo cancellation operations for a first call
30 path from the one of the plurality of local telecommunication switches to
31 the first one of the first plurality of the local telephone switching offices of
32 the first one of the plurality of local exchange carriers; and
33 adjusting the echo cancellation capabilities of the first trunk
34 circuit with respect to an echo tail length upon the first call path being
35 established.

1 2. (Canceled)

1 3. (Original) The method of claim 1 wherein the step of
2 providing comprises the steps of verifying that the first trunk circuit has
3 echo cancellation capabilities;
4 activating the first trunk circuit to provide echo cancellation
5 operations on the first call path.

1 4. (Original) The method of claim 3 wherein the step of
2 providing comprises the step of adjusting the echo cancellation
3 capabilities of the first trunk circuit with respect to an echo tail length for
4 the first call path.

1 5. (Original) The method of claim 1 wherein the one of the
2 plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit, a second trunk circuit, and a third
4 trunk circuit are connected where the third trunk circuit is part of a second
5 call path from the one of the plurality of local telecommunication switches
6 to the first one of the second plurality of local telephone switching offices
7 of the one of the second plurality of local exchange carriers and the step

Serial No. 09/943,283

8 of providing comprises the steps of verifying that the second trunk circuit
9 has echo cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network, second trunk circuit,
12 switching network and third trunk circuit; and
13 enabling the second trunk circuit to provide echo cancellation
14 operations on audio information coming from the third trunk circuit.

1 6. (Original) The method of claim 5 wherein the step of
2 providing comprises the step of adjusting the echo cancellation
3 capabilities of the second trunk circuit with respect to an echo tail length
4 for the second call path.

1 7. (Original) The method of claim 1 wherein the one of the
2 plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit and a second trunk circuit are
4 connected where the second trunk circuit is part of a second call path from
5 the one of the plurality of local telecommunication switches to the first one
6 of the second plurality of local telephone switching offices of the one of the
7 second plurality of local exchange carriers and the step of providing
8 comprises the steps of verifying that the second trunk circuit has echo
9 cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network and second trunk
12 circuit; and
13 enabling the second trunk circuit to provide echo cancellation
14 operations on audio information coming from the first trunk circuit.

1 8. (Original) The method of claim 7 wherein the step of
2 providing comprises the step of adjusting the echo cancellation

Serial No. 09/943,283

3 capabilities of the first trunk circuit with respect to an echo tail length for
4 the first call path.

1 9. (Original) The method of claim 1 wherein the one of the
2 plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit, a second trunk circuit, and a third
4 trunk circuit are connected where the third trunk circuit is part of a second
5 call path from the one of the plurality of local telecommunication switches
6 to the first one of the second plurality of local telephone switching offices
7 of the one of the second plurality of local exchange carriers and the step
8 of providing comprises the steps of verifying that the second trunk circuit
9 has echo cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network, second trunk circuit,
12 switching network and third trunk circuit;
13 enabling the second trunk circuit to provide echo cancellation
14 operations on audio information coming from the first trunk circuit;
15 determining by the one of the plurality of local
16 telecommunication switches in response to the call setup message that a
17 first one of the plurality of local telephone switching offices of the one of
18 the second plurality of local exchange carriers to which the one of the
19 second plurality of telephone sets is connected requires echo cancellation
20 operations; and
21 enabling the third trunk circuit to provide echo cancellation
22 operations on audio information coming from the second call path.

1 10. (Original) The method of claim 9 wherein the step of
2 providing comprises the step of adjusting the echo cancellation
3 capabilities of the third trunk circuit with respect to an echo tail length for
4 the second call path.

Serial No. 09/943,283

1 11. (Original) The method of claim 1 wherein the one of the
2 plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit and a second trunk circuit are
4 connected where the second trunk circuit is part of a second call path from
5 the one of the plurality of local telecommunication switches to the first one
6 of the second plurality of local telephone switching offices of the one of the
7 second plurality of local exchange carriers and the step of providing
8 comprises the steps of verifying that the second trunk circuit has echo
9 cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network, and second trunk
12 circuit;
13 enabling the first trunk circuit to provide echo cancellation
14 operations on audio information coming from the first call path;
15 determining by the one of the plurality of local
16 telecommunication switches in response to the call setup message that
17 the first one of the second plurality of local telephone switching offices of
18 the one of the second plurality of local exchange carriers to which the one
19 of the second plurality of telephone sets is connected requires echo
20 cancellation operations; and
21 enabling the second trunk circuit to provide echo cancellation
22 operations on audio information coming from the second call path.

1 12. (Original) The method of claim 11 wherein the step of
2 providing comprises the step of adjusting the echo cancellation
3 capabilities of the second trunk circuit with respect to an echo tail length
4 for the second call path.

1 13. (Currently Amended) A method for controlling echoes
2 within a telecommunication switching system having a plurality of local

Serial No. 09/943,283

3 exchange carriers, and a plurality of local telecommunication switches
4 where each of the plurality of local exchange carriers is connected to a
5 plurality of telephone sets attached to a plurality of local telephone
6 switching offices of each of the plurality of local exchange carriers and
7 each of the plurality of local telecommunication switches is connected to a
8 plurality of telephone sets and a first and second ones of the plurality of
9 local telecommunication switches interconnected by a third plurality of
10 local exchange carriers, comprising the steps of:
11 receiving by one of the plurality of local telecommunication
12 switches a call setup message from one of a first plurality of telephone
13 sets connected to one of a first plurality of local exchange carriers via the
14 third plurality of local exchange carriers and the second one of the plurality
15 of local telecommunication switches and a first trunk circuit
16 interconnecting the first one of the plurality of local telecommunication
17 switches with the third one of the plurality of local exchange carriers;
18 determining by the first one of the plurality of local
19 telecommunication switches that the call setup message designates one
20 of a second plurality of telephone sets connected to one of a second
21 plurality of local telephone switching offices of one of a second plurality of
22 local exchange carriers as a destination of the call setup message;
23 determining by the first one of the plurality of local
24 telecommunication switches in response to the call setup message that a
25 first one of a first plurality of local telephone switching offices of the one of
26 the first plurality of local exchange carriers to which the one of the first
27 plurality of telephone sets is connected requires echo cancellation
28 operations; and
29 providing by the first one of the plurality of local
30 telecommunication switches in response to the determination that echo
31 cancellation operations are required for the first one of the first plurality of
32 local telephone switching offices echo cancellation operations for a first

Serial No. 09/943,283

33 call path from the first one of the plurality of local telecommunication
34 switches to the first one of the first plurality of the local telephone
35 switching offices of the first one of the plurality of local exchange carriers;
36 and
37 adjusting the echo cancellation capabilities of the first trunk
38 circuit with respect to an echo tail length upon the first call path being
39 established.

1 14. (Original) The method of claim 13 wherein the step of
2 providing comprises the steps of verifying that the first trunk circuit has
3 echo cancellation capabilities;
4 activating the first trunk circuit to provide echo cancellation
5 operations on the first call path.

1 15. (Canceled)

1 16. (Original) The method of claim 13 wherein the first one of
2 the plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit, a second trunk circuit, and a third
4 trunk circuit are connected where the third trunk circuit is part of a second
5 call path from the first one of the plurality of local telecommunication
6 switches to the first one of the second plurality of local telephone switching
7 offices of the one of the second plurality of local exchange carriers and the
8 step of providing comprises the steps of verifying that the second trunk
9 circuit has echo cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network, second trunk circuit,
12 switching network and third trunk circuit; and
13 enabling the second trunk circuit to provide echo cancellation
14 operations on audio information coming from the first trunk circuit.

Serial No. 09/943,283

1 17. (Original) The method of claim 13 wherein the first one of
2 the plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit and a second trunk circuit are
4 connected where the second trunk circuit is part of a second call path from
5 the first one of the plurality of local telecommunication switches to the first
6 one of the second plurality of local telephone switching offices of the one
7 of the second plurality of local exchange carriers and the step of providing
8 comprises the steps of verifying that the second trunk circuit has echo
9 cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network and second trunk
12 circuit; and
13 enabling the second trunk circuit to provide echo cancellation
14 operations on audio information coming from the first trunk circuit.

1 18. (Original) The method of claim 13 wherein the first one of
2 the plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit, a second trunk circuit, and a third
4 trunk circuit are connected where the third trunk circuit is part of a second
5 call path from the first one of the plurality of local telecommunication
6 switches to the first one of the second plurality of local telephone switching
7 offices of the one of the second plurality of local exchange carriers and the
8 step of providing comprises the steps of verifying that the second trunk
9 circuit has echo cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network, second trunk circuit,
12 switching network and third trunk circuit;
13 enabling the second trunk circuit to provide echo cancellation
14 operations on audio information coming from the first trunk circuit;

Serial No. 09/943,283

15 determining by the first one of the plurality of local
16 telecommunication switches in response to the call setup message that a
17 first one of the second plurality of local telephone switching offices of the
18 one of the second plurality of local exchange carriers to which the one of
19 the second plurality of telephone sets is connected requires echo
20 cancellation operations; and
21 enabling the third trunk circuit to provide echo cancellation
22 operations on audio information coming from the second call path.

1 19. (Original) The method of claim 13 wherein the first one of
2 the plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit and a second trunk circuit are
4 connected where the second trunk circuit is part of a second call path from
5 the first one of the plurality of local telecommunication switches to the first
6 one of the second plurality of local telephone switching offices of the one
7 of the second plurality of local exchange carriers and the step of providing
8 comprises the steps of verifying that the second trunk circuit has echo
9 cancellation capabilities;
10 establishing an internal path from the first and second call
11 paths through the first trunk circuit, switching network, and second trunk
12 circuit;
13 enabling the first trunk circuit to provide echo cancellation
14 operations on audio information coming from the first call path;
15 determining by the first one of the plurality of local
16 telecommunication switches in response to the call setup message that
17 the first one of the second plurality of local telephone switching offices of
18 the one of the second plurality of local exchange carriers to which the one
19 of the second plurality of telephone sets is connected requires echo
20 cancellation operations; and

Serial No. 09/943,283

21 enabling the second trunk circuit to provide echo cancellation
22 operations on audio information coming from the second call path.

1 20. (Amended) A method for controlling echoes within a
2 telecommunication switching system having a plurality of local exchange
3 carriers, a wide area network, pluralities of softphones, a plurality of
4 remote switches, and a plurality of local telecommunication switches
5 where each of the plurality of local exchange carriers is connected to a
6 plurality of telephone sets attached to a plurality of local telephone
7 switching offices of each of the plurality of local exchange carriers and
8 each of the plurality of local telecommunication switches is connected to a
9 plurality of telephone sets and each of the plurality of remote switches is
10 connected to a first plurality of softphones, comprising the steps of:
11 connecting the plurality of remote switches to each of the
12 plurality of local telecommunication switches via the wide area network;
13 providing echo cancellation circuits in each of the plurality of
14 remote switches with each echo cancellation circuit having an echo tail
15 length adjusted to eliminate an echo produced by each of the first plurality
16 of softphones;
17 connecting each of a second plurality of softphones to each of
18 the plurality of local telecommunication switches via the wide area
19 network;
20 providing an echo cancellation circuit in each of the second
21 plurality of softphones having an echo tail length adjusted to eliminate an
22 echo produced by each of the second plurality of softphones;
23 connecting one of the plurality of local exchange carriers to the
24 wide area network via one of the plurality of local telecommunication
25 switches with the one of the plurality of local exchange carriers
26 interconnected to the one of the plurality of local telecommunication

Serial No. 09/943,283

27 switches by a plurality of trunk circuits in the one of the plurality of local
28 telecommunication switches; ~~and~~
29 providing echo cancellation operations in each of the plurality of
30 trunk circuits adjusted to eliminate echoes produced by the one of the
31 plurality of local exchange carriers on an individual call path basis; and
32 adjusting the echo cancellation capabilities of the first trunk
33 circuit with respect to an echo tail length upon the first call path being
34 established.

1 21. (Original) The method of claim 20 wherein the step of
2 providing echo cancellation operation in each of the plurality of trunk
3 circuits comprises the steps of determining by the one of the plurality of
4 local telecommunication switches that a call setup message received from
5 the one of the plurality of local exchange carriers via one of the plurality of
6 trunk circuits designates one of the first plurality of softphones connected
7 to the one of the plurality of the local exchange carriers;
8 determining by the one of the plurality of local
9 telecommunication switches in response to the call setup message that a
10 first one of a plurality of local telephone switching offices of the one of the
11 first plurality of local exchange carriers to which the one of the plurality of
12 telephone sets is connected requires echo cancellation operations; and
13 enabling the one of the plurality of trunk circuits to provide an
14 echo cancellation operation for a telephone call associated with the call
15 setup message.

1 22. (Canceled)

1 23. (Currently Amended) The method of claim ~~22~~ 20 wherein
2 the one of the plurality of local telecommunication switches is connected
3 to the wide area network by a Internet Protocol trunk circuit and the step of

Serial No. 09/943,283

4 providing the echo cancellation operation further comprises providing an
5 additional echo cancellation operation in the Internet Protocol trunk circuit.

1 24. (Original) The method of claim 20 wherein the one of the
2 plurality of local telecommunication switches is connected to the wide area
3 network by a Internet Protocol trunk circuit and the step of providing echo
4 cancellation operation in the Internet Protocol trunk circuit comprises the
5 steps of determining by the one of the plurality of local telecommunication
6 switches that a call setup message received from the one of the plurality
7 of local exchange carriers via one of the plurality of trunk circuits
8 designates one of the first plurality of softphones connected to the one of
9 the plurality of the local exchange carriers;
10 determining by the one of the plurality of local
11 telecommunication switches in response to the call setup message that a
12 first one of a plurality of local telephone switching offices of the one of the
13 first plurality of local exchange carriers to which the one of the plurality of
14 telephone sets is connected requires echo cancellation operations; and
15 enabling the Internet Protocol trunk circuit to provide an echo
16 cancellation operation for a telephone call associated with the call setup
17 message.

1 25. (Original) The method of claim 24 wherein the step of
2 providing comprises the step of adjusting the echo cancellation
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail
4 length for the first call path.

1 26. (Original) The method of claim 25 wherein the step of
2 providing the echo cancellation operation further comprises providing an
3 additional echo cancellation operation in the one of the plurality of trunk
4 circuits.

Serial No. 09/943,283

1 27. (Original) The method of claim 26 wherein the step of
2 further providing comprises the step of adjusting the echo cancellation
3 capabilities of the one of the plurality of trunk circuits.

1 28. (Original) The method of claim 20 wherein the one of the
2 plurality of local telecommunication switches is connected to the wide area
3 network by a Internet Protocol trunk circuit and the step of providing echo
4 cancellation operation in the Internet Protocol trunk circuit comprises the
5 steps of further determining by the one of the plurality of local
6 telecommunication switches that another call setup message received
7 from the one of the plurality of local exchange carriers via one of the
8 plurality of trunk circuits designates one of the second plurality of
9 softphones connected to the one of the plurality of the local exchange
10 carriers;

11 determining by the one of the plurality of local
12 telecommunication switches in response to the call setup message that a
13 first one of a plurality of local telephone switching offices of the one of the
14 first plurality of local exchange carriers to which the one of the plurality of
15 telephone sets is connected requires echo cancellation operations; and
16 enabling the Internet Protocol trunk circuit to provide an echo
17 cancellation operation for a telephone call associated with the other call
18 setup message.

1 29. (Original) The method of claim 28 wherein the step of
2 providing comprises the step of adjusting the echo cancellation
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail
4 length for the first call path.

1 30. (Original) The method of claim 29 wherein the step of
2 providing the echo cancellation operation further comprises providing an

Serial No. 09/943,283

3 additional echo cancellation operation in the one of the plurality of trunk
4 circuits.

1 31. (Original) The method of claim 30 wherein the step of
2 further providing comprises the step of adjusting the echo cancellation
3 capabilities of the one of the plurality of trunk circuits.

1 32. (Currently Amended) An apparatus for controlling echoes
2 within a telecommunication switching system having a plurality of local
3 exchange carriers and a plurality of local telecommunication switches
4 where each of the plurality of local exchange carriers is connected to a
5 plurality of telephone sets attached to a plurality of local telephone
6 switching offices of each of the plurality of local exchange carriers and
7 each of the plurality of local telecommunication switches is connected to a
8 plurality of telephone sets, comprising:
9 means for receiving by one of the plurality of local
10 telecommunication switches a call setup message from one of a first
11 plurality of telephone sets connected to one of a first plurality of local
12 exchange carriers with a first trunk circuit interconnecting the one of the
13 plurality of local telecommunication switches with the one of the first
14 plurality of local exchange carriers;
15 means for determining by the one of the plurality of local
16 telecommunication switches that the call setup message designates one
17 of a second plurality of telephone sets connected to one of a second
18 plurality of local exchange carriers as a destination of the call setup
19 message;
20 means for determining by the one of the plurality of local
21 telecommunication switches in response to the call setup message that a
22 first one of a first plurality of local telephone switching offices of the one of
23 the first plurality of local exchange carriers to which the one of the first

Serial No. 09/943,283

24 plurality of telephone sets is connected requires echo cancellation
25 operations; and
26 means for providing by the one of the plurality of local
27 telecommunication switches in response to the determination that echo
28 cancellation operations are required for the first one of the first plurality of
29 local telephone switching offices echo cancellation operations for a first
30 call path from the one of the plurality of local telecommunication switches
31 to the first one of the first plurality of the local telephone switching offices
32 of the first one of the plurality of local exchange carriers; and
33 means for adjusting the echo cancellation capabilities of the
34 first trunk circuit with respect to an echo tail length upon the first call path
35 being established.

1 33. (Canceled)

1 34. (Original) The apparatus of claim 32 wherein the means
2 for providing comprises means for verifying that the first trunk circuit has
3 echo cancellation capabilities;
4 means for activating the first trunk circuit to provide echo
5 cancellation operations on the first call path.

1 35. (Original) The apparatus of claim 34 wherein the means
2 for providing comprises means for adjusting the echo cancellation
3 capabilities of the first trunk circuit with respect to an echo tail length for
4 the first call path.

1 36. (Original) The apparatus of claim 32 wherein the one of
2 the plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit, a second trunk circuit, and a third
4 trunk circuit are connected where the third trunk circuit is part of a second

Serial No. 09/943,283

5 call path from the one of the plurality of local telecommunication switches
6 to the first one of the second plurality of local telephone switching offices
7 of the one of the second plurality of local exchange carriers and the
8 means for providing comprises means for verifying that the second trunk
9 circuit has echo cancellation capabilities;

10 means for establishing an internal path from the first and
11 second call paths through the first trunk circuit, switching network, second
12 trunk circuit, switching network and third trunk circuit; and

13 means for enabling the second trunk circuit to provide echo
14 cancellation operations on audio information coming from the third trunk
15 circuit.

1 37. (Original) The apparatus of claim 36 wherein the means
2 for providing comprises means for adjusting the echo cancellation
3 capabilities of the second trunk circuit with respect to an echo tail length
4 for the second call path.

1 38. (Original) The apparatus of claim 32 wherein the one of
2 the plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit and a second trunk circuit are
4 connected where the second trunk circuit is part of a second call path from
5 the one of the plurality of local telecommunication switches to the first one
6 of the second plurality of local telephone switching offices of the one of the
7 second plurality of local exchange carriers and the means for providing
8 comprises means for verifying that the second trunk circuit has echo
9 cancellation capabilities;
10 means for establishing an internal path from the first and
11 second call paths through the first trunk circuit, switching network and
12 second trunk circuit; and

Serial No. 09/943,283

13 means for enabling the second trunk circuit to provide echo
14 cancellation operations on audio information coming from the first trunk
15 circuit.

1 39. (Original) The apparatus of claim 38 wherein the means
2 for providing comprises means for adjusting the echo cancellation
3 capabilities of the first trunk circuit with respect to an echo tail length for
4 the first call path.

1 40. (Original) The apparatus of claim 32 wherein the one of
2 the plurality of local telecommunication switches comprises a switching
3 network to which the first trunk circuit, a second trunk circuit, and a third
4 trunk circuit are connected where the third trunk circuit is part of a second
5 call path from the one of the plurality of local telecommunication switches
6 to the first one of the second plurality of local telephone switching offices
7 of the one of the second plurality of local exchange carriers and the
8 means for providing comprises means for verifying that the second trunk
9 circuit has echo cancellation capabilities;
10 means for establishing an internal path from the first and
11 second call paths through the first trunk circuit, switching network, second
12 trunk circuit, switching network and third trunk circuit;
13 means for enabling the second trunk circuit to provide echo
14 cancellation operations on audio information coming from the first trunk
15 circuit;
16 means for determining by the one of the plurality of local
17 telecommunication switches in response to the call setup message that a
18 first one of the plurality of local telephone switching offices of the one of
19 the second plurality of local exchange carriers to which the one of the
20 second plurality of telephone sets is connected requires echo cancellation
21 operations; and

Serial No. 09/943,283

22 means for enabling the third trunk circuit to provide echo
23 cancellation operations on audio information coming from the second call
24 path.

1 41. (Original) The apparatus of claim 40 wherein the means
2 for providing comprises means for adjusting the echo cancellation
3 capabilities of the third trunk circuit with respect to an echo tail length for
4 the second call path.

1 42. (Currently Amended) An apparatus for controlling echoes
2 within a telecommunication switching system having a plurality of local
3 exchange carriers, a wide area network, pluralities of softphones, a
4 plurality of remote switches, and a plurality of local telecommunication
5 switches where each of the plurality of local exchange carriers is
6 connected to a plurality of telephone sets attached to a plurality of local
7 telephone switching offices of each of the plurality of local exchange
8 carriers and each of the plurality of local telecommunication switches is
9 connected to a plurality of telephone sets and each of the plurality of
10 remote switches is connected to a first plurality of softphones, comprising:
11 means for connecting the plurality of remote switches to each
12 of the plurality of local telecommunication switches via the wide area
13 network;
14 means for providing echo cancellation circuits in each of the
15 plurality of remote switches with each echo cancellation circuit having an
16 echo tail length adjusted to eliminate an echo produced by each of the first
17 plurality of softphones;
18 means for connecting each of a second plurality of softphones
19 to each of the plurality of local telecommunication switches via the wide
20 area network;

Serial No. 09/943,283

21 means for providing an echo cancellation circuit in each of the
22 second plurality of softphones having an echo tail length adjusted to
23 eliminate an echo produced by each of the second plurality of softphones;
24 means for connecting one of the plurality of local exchange
25 carriers to the wide area network via one of the plurality of local
26 telecommunication switches with the one of the plurality of local exchange
27 carriers interconnected to the one of the plurality of local
28 telecommunication switches by a plurality of trunk circuits in the one of the
29 plurality of local telecommunication switches; and
30 means for providing echo cancellation operations in each of the
31 plurality of trunk circuits adjusted to eliminate echoes produced by the one
32 of the plurality of local exchange carriers on an individual call path basis;
33 and
34 means for adjusting the echo cancellation capabilities of the
35 first trunk circuit with respect to an echo tail length upon the first call path
36 being established.

1 43. (Original) The apparatus of claim 42 wherein the means
2 for providing echo cancellation operation in each of the plurality of trunk
3 circuits comprises means for determining by the one of the plurality of
4 local telecommunication switches that a call setup message received from
5 the one of the plurality of local exchange carriers via one of the plurality of
6 trunk circuits designates one of the first plurality of softphones connected
7 to the one of the plurality of the local exchange carriers;
8 means for determining by the one of the plurality of local
9 telecommunication switches in response to the call setup message that a
10 first one of a plurality of local telephone switching offices of the one of the
11 first plurality of local exchange carriers to which the one of the plurality of
12 telephone sets is connected requires echo cancellation operations; and

Serial No. 09/943,283

13 means for enabling the one of the plurality of trunk circuits to
14 provide an echo cancellation operation for a telephone call associated with
15 the call setup message.

1 44. (Canceled)

1 45. (Original) The apparatus of claim 44 42 wherein the one of
2 the plurality of local telecommunication switches is connected to the wide
3 area network by a Internet Protocol trunk circuit and the means for
4 providing the echo cancellation operation further comprises providing an
5 additional echo cancellation operation in the Internet Protocol trunk circuit.

1 46. (Original) The apparatus of claim 42 wherein the one of
2 the plurality of local telecommunication switches is connected to the wide
3 area network by a Internet Protocol trunk circuit and the means for
4 providing echo cancellation operation in the Internet Protocol trunk circuit
5 comprises means for determining by the one of the plurality of local
6 telecommunication switches that a call setup message received from the
7 one of the plurality of local exchange carriers via one of the plurality of
8 trunk circuits designates one of the first plurality of softphones connected
9 to the one of the plurality of the local exchange carriers;
10 means for determining by the one of the plurality of local
11 telecommunication switches in response to the call setup message that a
12 first one of a plurality of local telephone switching offices of the one of the
13 first plurality of local exchange carriers to which the one of the plurality of
14 telephone sets is connected requires echo cancellation operations; and
15 means for enabling the Internet Protocol trunk circuit to provide
16 an echo cancellation operation for a telephone call associated with the call
17 setup message.

Serial No. 09/943,283

1 47. (Original) The apparatus of claim 46 wherein the means
2 for providing comprises means for adjusting the echo cancellation
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail
4 length for the first call path.

1 48. (Original) The apparatus of claim 47 wherein the means
2 for providing the echo cancellation operation further comprises providing
3 an additional echo cancellation operation in the one of the plurality of trunk
4 circuits.

1 49. (Original) The apparatus of claim 48 wherein the means
2 for providing comprises further adjusting the echo cancellation capabilities
3 of the one of the plurality of trunk circuits.

1 50. (Original) The apparatus of claim 42 wherein the one of
2 the plurality of local telecommunication switches is connected to the wide
3 area network by a Internet Protocol trunk circuit and the means for
4 providing echo cancellation operation in the Internet Protocol trunk circuit
5 comprises means for further determining by the one of the plurality of local
6 telecommunication switches that another call setup message received
7 from the one of the plurality of local exchange carriers via one of the
8 plurality of trunk circuits designates one of the second plurality of
9 softphones connected to the one of the plurality of the local exchange
10 carriers;

11 means for determining by the one of the plurality of local
12 telecommunication switches in response to the call setup message that a
13 first one of a plurality of local telephone switching offices of the one of the
14 first plurality of local exchange carriers to which the one of the plurality of
15 telephone sets is connected requires echo cancellation operations; and

Serial No. 09/943,283

16 means for enabling the Internet Protocol trunk circuit to provide
17 an echo cancellation operation for a telephone call associated with the
18 other call setup message.

1 51. (Original) The apparatus of claim 50 wherein the means
2 for providing comprises means for adjusting the echo cancellation
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail
4 length for the first call path.

1 52. (Original) The apparatus of claim 51 wherein the means
2 for providing the echo cancellation operation further comprises providing
3 an additional echo cancellation operation in the one of the plurality of trunk
4 circuits.

1 53. (Original) The apparatus of claim 52 wherein the means
2 for providing comprises further adjusting the echo cancellation capabilities
3 of the one of the plurality of trunk circuits.